

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-31 (cancelled).

32. (new) An environment monitoring system, comprising:
at least one unmanned, ground local device, apt to be installed in the environment to be monitored and having acquisition means for acquiring environmental data apt to detect critical thermal variations in the area of interest;
a central control station, comprising storage means for storing logistical-technical data and data about the available intervention means pertaining to the monitored environment;
means for transmitting/receiving data, for bilateral communication between said central control station and said at least one local device; and
means for the integrated processing of the environmental data acquired by said at least one local device and of the data contained in said storage means, apt to provide as their output a model of evolution of the thermal front consequent to a critical thermal variation and an intervention plan for limiting the damages associated therewith,
wherein said acquisition means of said at least one local device comprises: fire detection means for detecting energy emissions in the infrared range; meteorological data detection means; and image acquisition means comprising at least one telecamera that operates in the visible range, wherein said fire detection means are apt to determine the activation of said telecamera in response to the detection of energy emissions exceeding a predetermined threshold,
and wherein said at least one local device comprises also self-powering means and a support structure supporting said acquisition means and apt to be anchored to the ground at a desired location.

33. (new) The system as claimed in claim 32, comprising a plurality of local devices apt to be installed in the environment to be monitored.

34. (new) The system as claimed in claim 32, comprising means for processing the energy emissions detected by said detection means apt to analyse said emissions on a plurality of emission bands.

35. (new) The system as claimed in claim 32, wherein said detection means comprise at least one thermo-camera operating in the infrared range.

36. (new) The system as claimed in claim 35, wherein said at least one thermo-camera is provided with an infrared micro-bolometric sensor.

37. (new) The system as claimed in claim 32, wherein said means for transmitting/receiving data are able to transmit images from said at least one local device to said central control station in a visible and/or an infrared mode.

38. (new) The system as claimed in claim 32, wherein said meteorological data detection means comprise acquisition means selected within a group comprising means for measuring wind velocity and direction, humidity, pressure, and temperatures of air, ground or dew.

39. (new) The system as claimed in claim 38, wherein said meteorological data detection means are implementable with sensors for detecting parameters considered necessary for the correct analysis of the phenomenon of thermal variations and of its model of evolution.

40. (new) The system as claimed in claim 32, wherein said acquisition means comprise location means apt to allow the automatic determination of the geographic co-ordinates of the related local device.

41. (new) The system as claimed in claim 32, comprising means apt to determine the geographic co-ordinates of a thermal variation detected by said means for acquiring environmental data.

42. (new) The system as claimed in claim 32, wherein one or more of said at least one local device comprises local processing means of the acquired data.

43. (new) The system as claimed in claim 32, wherein one or more of said at least one local device comprises local storage means of the acquired data.

44. (new) The system as claimed in claim 32, wherein said support structure for supporting said acquisition means has a substantially tripod shape.

45. (new) The system as claimed in claim 44, wherein said support structure comprises a platform positioned in correspondence with an upper portion of the structure itself.

46. (new) The system as claimed in claim 32, wherein one or more of said at least one local device comprises a rotatable platform for supporting said acquisition means.

47. (new) The system as claimed in claim 32, wherein said intervention plan comprises an indication of at least one optimal access path for reaching the area involved by a critical thermal variation.

48. (new) The system as claimed in claim 32, wherein said intervention plan comprises an estimate of a starting and/or an ending time of an intervention.

49. (new) The system as claimed in claim 32, wherein said central control station comprises interface means to allow the operators to select the intervention plan and wherein said integrated processing means are apt to adaptively modify said model of evolution of the thermal front according to the intervention plan selected by the operators of said central control station.

50. (new) The system as claimed in claim 32, wherein said integrated processing means comprises means apt to classify the detected thermal variation according to a danger index.

51. (new) The system as claimed in claim 32, wherein said central control station comprises interface means apt to communicate to the operators the data acquired by said at least one local device and the output data from said integrated processing means and apt to allow the interrogation of said storage means.

52. (new) The system as claimed in claim 32, wherein said central control station comprises interface means apt to allow the management of said acquisition means of said at least one local device by the operators of said central station.

53. (new) The system as claimed in claim 32, comprising means for communicating with agencies for implementing said intervention plan.

54. (new) A method for environmental monitoring, comprising:

- (a) installing on the territory to be monitored at least one unmanned, ground local device having acquisition means for acquiring environmental data apt to detect critical thermal variations in the area of interest;
- (b) storing in a central control station logistical-technical data and data about available intervention means relating to the monitored environment; and
- (c) processing, in an integrated mode, the acquired environmental data and the stored logistical-technical data in such a way as to provide a model of evolution of the thermal front consequent to a critical thermal variation and an intervention plan for limiting the damages associated therewith,

wherein said acquisition means of said at least one local device comprises: fire detection means for detecting energy emissions in the infrared range; meteorological data detection means; and image acquisition means comprising at least a telecamera that operates in the visible range, wherein said fire detection means are apt to determine the activation of said telecamera in response to the detection of energy emissions exceeding a predetermined threshold, and wherein said at least one local device comprises self-powering means and a support structure supporting said acquisition means and apt to be anchored to the ground at a desired location.

55. (new) The method as claimed in claim 54, wherein said installing comprises installing a plurality of acquisition means distributed in the environment to be monitored.

56. (new) The method as claimed in claim 54, comprising processing the energy emissions detected by said detection means wherein the acquired data are analysed on a plurality of emission bands.

57. (new) The method as claimed in claim 54, additionally comprising transmitting data from said acquisition means to said central control station that provides for the transmission of images in a visible and/or infrared mode.

58. (new) The method as claimed in claim 54, comprising determining the geographic co-ordinates of a thermal variation detected by said means for acquiring environmental data.

59. (new) The method as claimed in claim 54, wherein said processing to provide an intervention plan comprises indicating at least one optimal access path for reaching the area affected by a critical thermal variation.

60. (new) The method as claimed in claim 54, wherein said processing to provide an intervention plan comprises estimating a starting and/or an ending time of an intervention.

61. (new) The method as claimed in claim 54, wherein said processing comprises adaptively modifying the model of evolution of the thermal front according to the intervention plan selected by the operators of said central control station.

62. (new) The method as claimed in claim 54, wherein said processing comprises classifying the detected thermal variation according to a danger index.